

IN THE CLAIMS

1. (currently amended) A breathing assistance device for a patient, comprising:

a source of respiratory pressurized gas, where the gas source is a ventilator ~~having at least an inlet rotor;~~

a breathing connection for allowing the patient to receive said pressurized gas;

at least one sensor for acquiring a parameter representative of the operation of the device; and

a central control unit for operating the device in at least one airway pressure ventilation mode based on information from said at least one sensor; and

a removable module removably connectable to the breathing connection, said removable module comprising a first part and a second part, wherein

said ventilator is integrated into the first part of the ~~a removable module removably connectable to the breathing connection, wherein~~

said at least one sensor is contained in the second part of the removable module at a position downstream of the first part of the removable module, and

the breathing connection is a mask such that the removable module is directly connectable to the mask, ~~and wherein said at least one sensor for acquiring a parameter representative of the operation of the device is located in the removable module at a position downstream of the inlet rotor of the ventilator.~~

2. (previously presented) The device of claim 1, wherein said removable module comprises a pressure sensor of respiratory gas and a flow sensor.

3. (previously presented) The device of claim 1, wherein said removable module is fixable on the device by a removable connection such that disassembly of the module is easy.

4. (previously presented) The device of claim 1, wherein said removable module is fixable in a removable manner on the mask by removable fastening means.

5. (cancelled)

6. (cancelled)

7. (currently amended) The device of claim 1, wherein said mask is a non-vented mask ~~not having means allowing leaks~~.

8. (cancelled)

9. (previously presented) The device of claim 1, wherein an ensemble formed by the breathing connection and the removable module is linked with a link to a control console of the device integrating the central control unit.

10. (previously presented) The device of claim 9, wherein said link allows data to be transmitted between said ensemble and said central control unit.

11. (cancelled)

12. (previously presented) The device of claim 10, wherein said link helps to convey energy required to operate components of the removable module from said console to said ensemble.

13. (previously presented) The device of claim 10, wherein said link is a wired link.

14. (previously presented) The device of claim 1, wherein the ventilator is an axial ventilator.

15. (previously presented) The device of claim 14, wherein the rotor of the axial ventilator comprises a single stage.

16. (previously presented) The device of claim 15, wherein in the ventilator the respective directions of the input and output of respiratory gas are substantially parallel.

17. (previously presented) The device of claim 14, wherein the ventilator comprises:

a central input substantially aligned with an axis of rotation of the rotor of the ventilator,

an outlet allowing flux generated by said rotor to be collected according to an oblique direction relative to said axis of rotation, and

means for rectifying said flux that is generated and collected, so that the generated and collected flux flows out of the ventilator in a general direction substantially parallel to said axis of rotation of the rotor of the ventilator.

18. (previously presented) The device of claim 1, wherein the airway pressure ventilation mode is a BPAP mode.

19. (previously presented) The device of claim 1, wherein the airway pressure ventilation mode is a CPAP mode.

20. (previously presented) The device of claim 10, wherein said link is a wireless link.

21. (new) A breathing assistance device for a patient, comprising:

a source of respiratory pressurized gas, where the gas source is a ventilator having at least an inlet rotor and a motor;

a breathing connection for allowing the patient to receive said pressurized gas;

at least one sensor for acquiring a parameter representative of the operation of the device; and

a central control unit for operating the device in at least one airway pressure ventilation mode based on information from said at least one sensor,

wherein said ventilator is integrated into a removable module removably connectable to the breathing connection, wherein the breathing connection is a mask such that the removable module is directly connectable to the mask, and wherein said at least one sensor for acquiring a parameter representative of the operation of the device is located in the removable module at a position downstream of the inlet rotor of the ventilator and in the vicinity of the motor of the ventilator in order to substantially prevent condensation of gas nearby said at least one sensor.